Overview

Metro Transit Asset Management

- Three core elements:
  - Transit Assets Management Program (TAMP)
  - Base Expansion Strategic Plan
  - Fleet Replacement/Expansion Planning

1

Overview

Common Elements:

- Preserve existing capabilities & functionality
- Forecast future requirements & estimate costs
- Provide a budgetary mechanism for reserving funds to meet future needs
- Protect assets through an integrated operating, maintenance, and capital investment strategy

2

TAMP Program

- Initiated TAMP in 1985
  - Continuously improving ever since.
- Averages $50M-$56M for each 6-year budget cycle.
- KC Metro assets valued at over $1 Billion
- 75% of annual expenditures on Facilities & Infrastructure
  - Civil Systems (Pavement, Fuel Storage)
  - Architectural (Overhead Doors, Roofs)
  - Electrical (Fire Alarms, Lighting, Electrical Switchgear)
  - Mechanical (HVAC, Plumbing, Cranes, Lifts)
  - Combinations
- 25% on smaller equipment (welders, compressors, office)

3

TAMP Program

- Program administered by a Team…
  - Engineering
  - Maintenance/Operations
  - Budget
  - Project Management

  } Perform annual inspections, produce an Annual Facilities Conditions Report
- Prioritize recommendations annually
  - Safety, Regulatory compliance, Transit Operations, followed by other criteria such as technology improvements, cost savings
- Monitor current year projects for completion within scope, schedule, budget.
- Maintain TAMP database: CAMS (Company Assets Mgmt System)

4

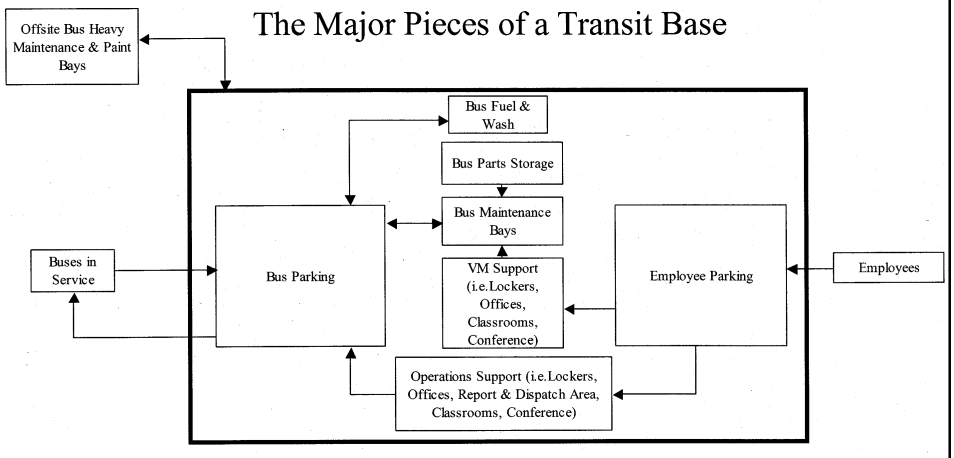
Base Strategic Plan

Strategic Planning Goals

- Provide sufficient fleet maintenance, parking, and operation capacity to support transit service plans
- Develop a multi-year capital improvement plan and budget for transit facilities
- Locate new capacity to optimize the planned service delivery increases at the lowest operating costs

5

The Major Pieces of a Transit Base



6

Base Strategic Plan

Strategic Planning Provides Transit with:

- A long range Base "map" (Base Expansion)
- A mid-term guide to Base needs (Base Improvements)
- A short term tool for current capacity (Fleet Assignment)
- Ability to adjust annually or when significant variables effecting capacity change

7

Base Strategic Plan

Our model measures & forecasts Base capacity by:

- bus parking
- maintenance bays
- parts storage/stores
- employee parking
- fuel & wash lanes
- administrative (office) areas
- driver reporting areas
- support areas (lockers, training, meeting rooms, etc)

8

Base Strategic Plan

The Current Condition Model identifies needs <u>beyond</u> parking & maintaining buses...

	Atlantic	Central	Ryerson	East	Bellevue	South	North
Driver Report & Supervisor Area	●	●	●	●		●	
Vehicle Maintenance Admin. Area	○	○	○	○		●	
Employee Parking	●	●	○			●	
Parts Inventory Area		●	○				
Vehicle Fuel and Wash	●						
Coach Parking	●	●				○	

● Exceeds 90% of LOS C capacity
○ Exceeds 110% of LOS C capacity

9

Base Strategic Plan

Service Plan triggers examination of Base capacity:

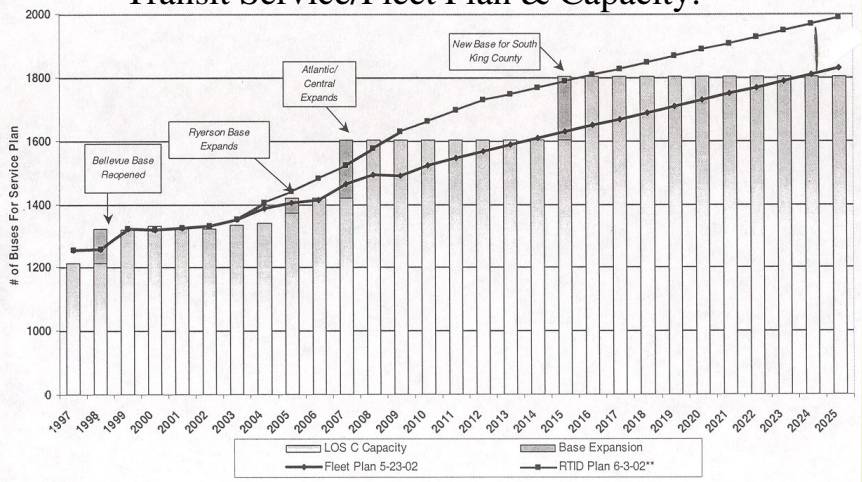
- Fleet size, mix
- Service hours, miles

- Capacity is managed to optimize the balance between operating costs and capital investments
- Bases are operated at capacities that permit reliable, stable service delivery
- Cost efficiency for operations
- Flexibility for service planning
- Maximize use of existing assets

10

Base Strategic Plan

Transit Service/Fleet Plan & Capacity:



*Includes Sound Transit Express Bus
**RTID – Regional Tax Package Scenario

Base Strategic Plan

Base Capacity Plans through 2025

- Make improvements at South & East Base (2003)
- Expand Ryerson Base bus parking (2005)
- Expand Atlantic/Central Bases (2007)
- Build 8th base in South King County (2015)
- Expect 9th Base (2025)

Fleet

Ten Year Fleet Plan

- Fleet Plan drivers:
  - Service development input on peak hour fleet demand and desired fleet mix
  - Composition of existing fleet
  - Federal policies on minimum useful life / maximum spare ratios,etc.
  - KC Metro policies
  - Cost of new coaches
  - Minimum new fleet size
  - Maximum intake rate of new buses
  - Alternatives to purchasing new coaches
  - Revised annually or when there is significant change

13

Fleet

Transit Fleet Replacement/Expansion Plan to 2025

		Fleets Assigned to Bases										Coach Needs		
	MANUFACTURER	YEAR IN SER\	TYPE	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
ACTUALS	MAN	1987	60' Trolley	44	26										
	BREDA	1990 - 1991	60' Dual	100											
	GILLIG	1996 - 2000	40' Diesel	395	395	395	395	395	395	372	100	50			
	GILLIG	1997	35' Diesel	15	15	15	15	15	15	15					
	NEW FLYER	1999 - 2000	60' Diesel	268	273	273	273	273	273	273	202	50	35		
	GILLIG	1999 - 2000	30' Diesel	95	95	95	95	95	95	95	95	95	95	95	
	GILLIG	2002	40' Trolley	100	100	100	100	100	100	100	100	100	100	30	
	CHAMPION	2002	25' Diesel	35	35	35									
	NEW FLYER	2003	40' Diesel	100	100	100	100	100	100	100	100	100	100	100	100
	NEW FLYER	2004	60' Hybrid	119	214	214	214	214	214	214	214	214	214	214	214
	NEW FLYER	2004	60' Diesel	30	30	30	30	30	30	30	30	30	30	30	30
PLANNED	BREDA	2004 - 2005	60' Trolley	2	20	59	59	59	59	59	59	59	59	39	
		2010 - 2013	40' Motor							47	285	316	335	335	335
		2011 - 2012	60' Motor								125	300	350	350	350
		2014 - 2015	30' Motor											27	120
		2014 - 2015	40' Trolley											63	93
		2014 - 2015	60' Trolley											40	80
	TOTAL ASSIGNED FLEET:			1303	1303	1316	1281	1281	1281	1305	1310	1314	1318	1323	1322
	PEAK BUS REQUIREMENTS:			1084	1113	1114	1106	1108	1111	1115	1119	1123	1126	1130	1134
	SPARES:			219	190	202	175	173	170	190	191	191	192	193	188
	SPARE RATIO (IN ASSIGNED FLEET):			20%	17%	18%	16%	16%	15%	17%	17%	17%	17%	17%	17%
	AVE. FLEET AGE (YRS/ASSIGNED FLEET):			5.24	4.88	5.44	6.48	7.48	8.48	9.08	7.01	5.33	5.55	5.51	4.74
	NUMBER OF DIESEL BUSES:			1157	1157	1157	1122	1122	1122	1146	1151	1155	1159	1151	1149
	NUMBER OF DIESEL ARTICS:			517	517	517	517	517	517	517	571	594	629	594	594
	DIESEL ARTIC % OF NON TROLLEY FLEET:			45%	45%	45%	46%	46%	46%	45%	50%	51%	54%	49%	48%